

IN THE CLAIMS:

1-15. (Canceled)

16. (New) An expression vector comprising two inverted terminal repeats of adeno-associated virus 2 and at least one cassette comprising a promoter capable of effecting cell-specific expression wherein said promoter is operably linked to a heterologous gene, and wherein said cassette resides between said inverted terminal repeats.

17. (New) The vector of claim 16 wherein each of said inverted terminal repeats comprises the nucleotides of SEQ ID NO:1.

18. (New) The vector of claim 16 wherein each of said inverted terminal repeats comprises nucleotides 1 to 125 of SEQ ID NO:1.

19. (New) The vector of claim 16 wherein said heterologous gene encodes a biologically functional protein.

20. (New) The vector of claim 16 wherein said heterologous gene encodes a non-biologically functional protein.

21. (New) The vector of claim 16 wherein said heterologous gene encodes an antisense RNA.

22. (New) The vector of claim 16 wherein said heterologous gene is selected from the group consisting of a gene encoding α -globin, β -globin, γ -globin, granulocyte macrophage-colony stimulating factor (GM-CSF), tumor necrosis factor (TNF), any one of interleukins 1-11, neomycin resistance, luciferase, adenine phosphoribosyl transferase (APRT), retinoblastoma, insulin, mast cell growth factor, p53, adenosine deaminase.

23. (New) The vector of claim 16 wherein said heterologous gene encodes P-glycoprotein.

24. (New) The vector of claim 21 wherein said antisense RNA is complementary to a segment of the DNA or RNA encoding α -globin.

25. (New) The vector of claim 16 wherein said vector is AAV-B19-mdr.

26. (New) A host cell transfected by the vector of any one of claims 16-25.

27. (New) The host cell of claim 26 wherein said cell is a hematopoietic stem or hematopoietic progenitor cell.

28. (New) A virion comprising the vector of any one of claims 16-24.

29. (New) A host cell infected by the virion of claim 28.

30. (New) The host cell of claim 29 wherein said cell is a hematopoietic stem or progenitor cell.